

(21) Application No 0020250.7

(22) Date of Filing 11.08.2000

(30) Priority Data

(31) 9919011

(32) 13.08.1999

(33) GB

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(51) INT CL<sup>7</sup>

A63F 5/00

(52) UK CL (Edition S)

A6H HJH

(56) Documents Cited

GB 2227946 A

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(58) Field of Search

UK CL (Edition S) A6H HJH HJX

INT CL<sup>7</sup> A63F 5/00 5/02 5/04

Online: WPI, EPODOC, JAPIO

(54) Abstract Title

Roulette gaming machine with chart of results

(57) A roulette gaming machine includes a simulated roulette wheel 10 having a plurality of ball receptors 16, means 12 for a player to place a bet upon which receptor a simulated ball 11 will land in and one or more counters corresponding to a receptor of the wheel wherein the counter is incremented each time the ball stops on a corresponding receptor. Preferably the values of the counters are displayed as a chart 15 in which the X-axis represents the receptors on the wheel and the Y-axis represents the values stored. Optionally the counters may be reset to 0 when a counter reaches a certain value or when the ball lands on the receptor marked "0" and more than one ball may be provided. A player may be awarded a bonus when a counter corresponding to a receptor upon which he placed a bet reaches a predetermined value. A further embodiment provides a roulette gaming system in which one or more gaming machines with counters are linked so that the roulette wheel, ball and bets made on each machine are shown on every other machine or the gaming machines may enter into a common counter. The display means may be located remotely from the machine(s).

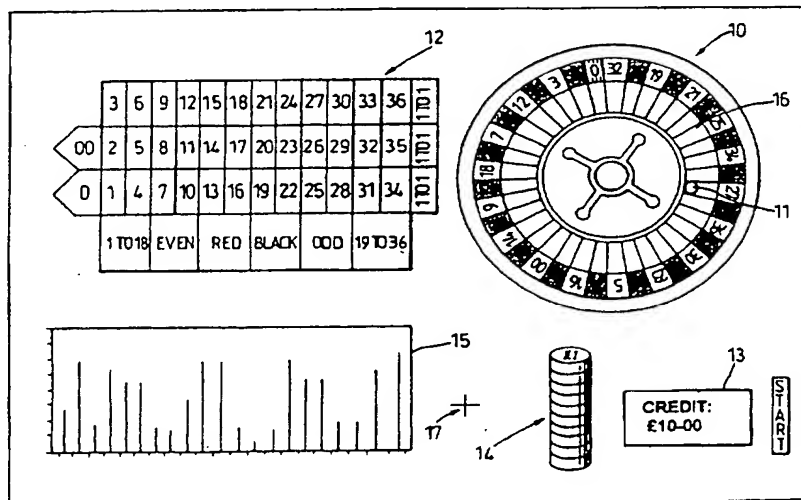


Fig. 1

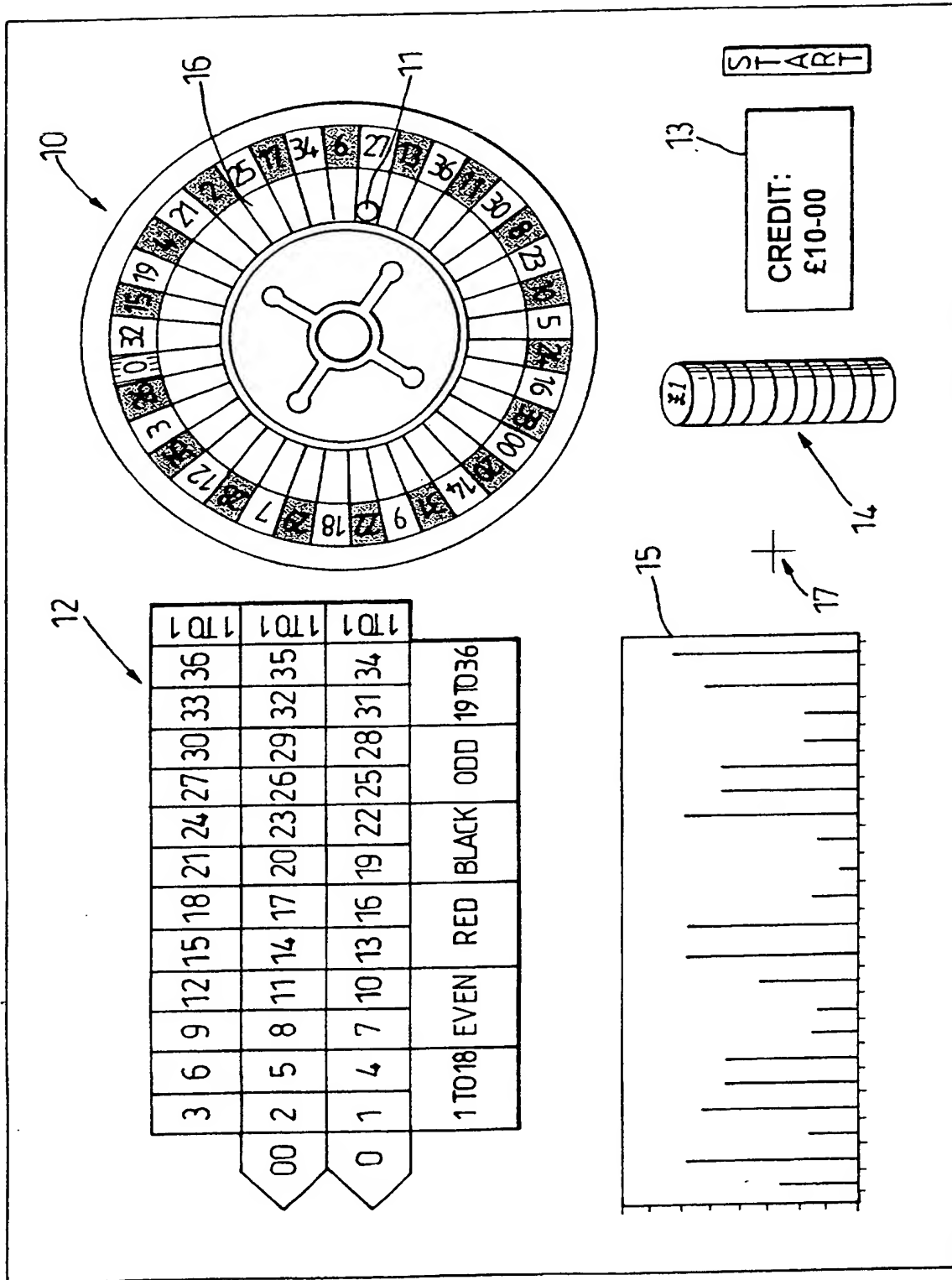
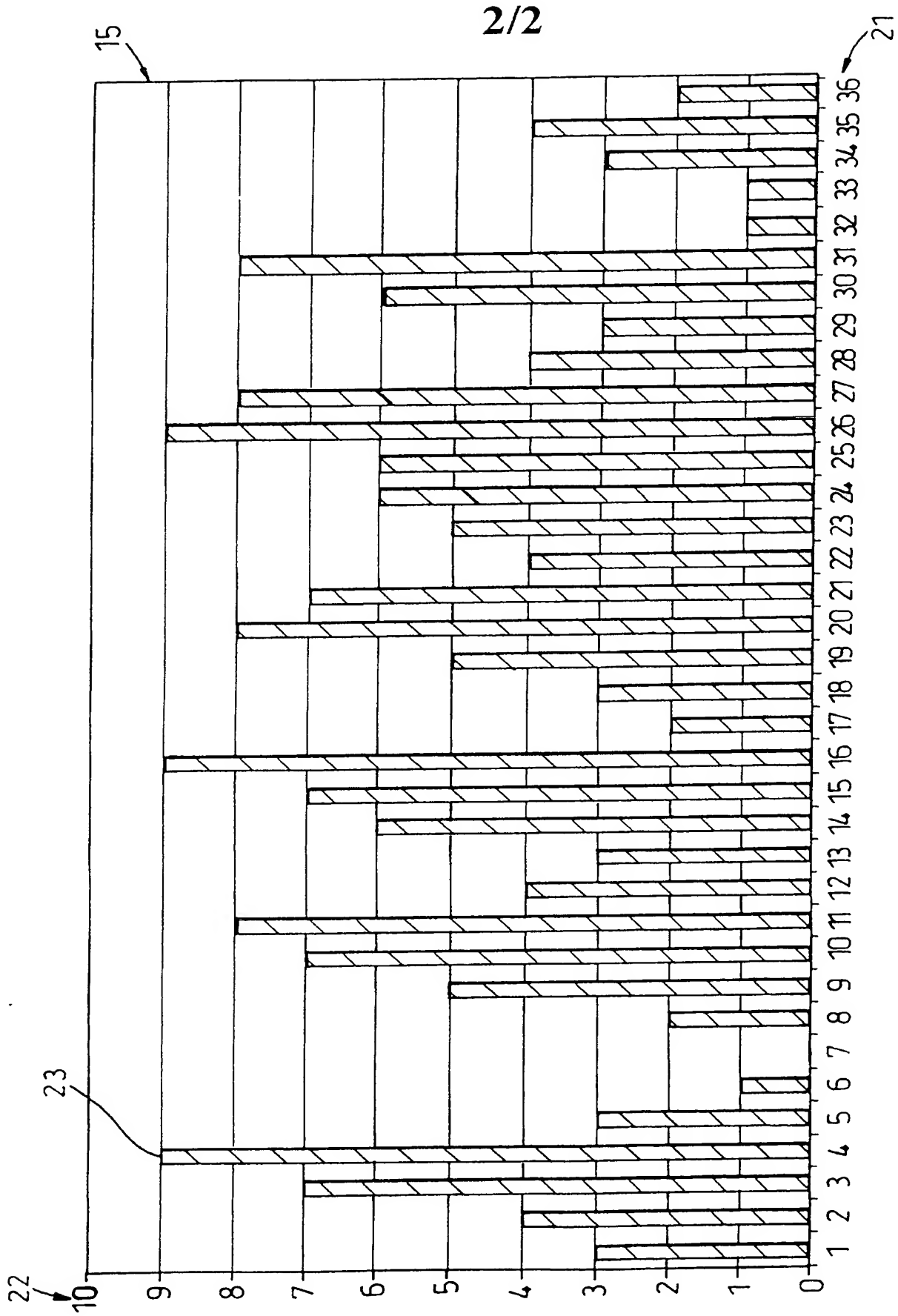


Fig. 1



*Fig. 2*

Improvements relating to Roulette Gaming Machines

This invention relates to Roulette gaming machines.

Gaming machines providing simulations of gambling games such as Roulette have become increasingly popular in recent years. The type of technology used in such gaming machines can vary from electro-mechanical arrangements involving an array of lamps behind a printed screen to cathode ray tube or liquid crystal display screens providing a dynamic electronic graphical simulation of a game. The displays of these machines show a simulated Roulette wheel having receptors in which a simulated ball can stop. The machines also provide means for one or more players to place bets upon which receptor of the wheel the ball will stop. The bet may be an actual amount of money inserted by the player into the machine, or may be "chips" representing a nominal amount of money to be debited from the player, for example by means of a smart card.

It is possible that the gaming machine is linked to one or more similar machines and the display on each linked machine shows the combined bets placed on all the machines and the same wheel. Each machine simultaneously makes a "no more bets" announcement after which the simulated wheel is spun and a simulated ball is released and eventually stops in one of the receptors of the wheel. This type of arrangement more closely represents the atmosphere of a Roulette game in a casino involving multiple players.

Most conventional Roulette gaming machines follow the

rules of conventional Roulette very closely. In an attempt to draw potential players to their particular machines, manufacturers try to design eye-catching cabinets and displays for the machines, or increase the amount of potential winnings. However, overall these features are  
5 aesthetic only and many players can become bored with the conventional game and seek variation.

An object of the present invention is to provide a secondary feature to enhance a game of Roulette played on a  
10 machine. The secondary feature is intended to encourage the player to continue playing the game as the chances of a bonus being awarded can increase during repeated play.

According to a first aspect of the invention there is provided a Roulette gaming machine including:

15 a display of a Roulette wheel having a plurality of ball receptors;

means for allowing a player to place one or more bets upon which of the receptors a ball will stop in a spin of the wheel, each said bet specifying a set of one or more  
20 receptors and an amount to be staked,

means for displaying a spin of the wheel in which the ball stops in one of the receptors, and

one or more counters, each said counter corresponding to a said receptor of the wheel,

25 wherein a counter is incremented each time the ball stops on the corresponding receptor.

Preferably, the machine further includes means for displaying a representation of at least some of the

counters. The display preferably includes a bar chart having its X-axis representing the receptors on the wheel, and its Y-axis representing values stored in the corresponding counters.

5       The machine may further include means for resetting one or more of the counters to zero. The resetting may occur when a counter reaches a predetermined value. In one embodiment the resetting occurs when the ball stops on the receptor marked 0 once.

10       The machine may further include means for awarding the player with a bonus when a counter corresponding to a receptor reaches a predetermined value. Alternatively, the bonus may only be awarded if the receptor corresponding to a counter which has reached the predetermined value in a  
15       simulated spin is a receptor upon which the player placed a bet. The bonus awarded may be a fixed amount of chips to be credited to the player, or the bonus may increase a winning bet by a predetermined amount.

      According to a further aspect of the present invention  
20       there is provided a Roulette gaming system comprising one or more gaming machines, each said machine having features as described above, wherein the gaming machines are linked so that the Roulette wheel and ball are displayed on all of the machines and the bets made by players of each of the  
25       machines are displayed on all of the machines.

      According to yet another aspect of the present invention there is provided a roulette gaming system comprising one or more gaming machine, each said gaming machine

including:

a display of a roulette wheel having a plurality of ball receptors;

means for allowing a player to place one or more bets  
5 upon which of the receptors a ball will stop in a spin of the wheel, each said bet specifying a set of one or more receptors and an amount to be staked, and

means for displaying a spin of the wheel in which the ball stops in one of the receptors,

10 the gaming system further including one or more counter, each said counter corresponding to a particular receptor on the wheels of the gaming machines,

the gaming machines being linked so that a said counter is incremented each time a said ball of any said gaming  
15 machine stops on a corresponding receptor.

The gaming system may further include means for displaying a representation of at least one of the counters. The display means may be located remotely from the gaming machine.

20 According to a further aspect of the present invention there is provided a method of playing Roulette on a gaming machine, the method comprising steps of:

receiving input representing one or more bets upon which receptors of a Roulette wheel a ball will stop in a  
25 spin of the wheel, each said bet specifying a set of one or more receptors and an amount to be staked;

displaying a spin of the wheel in which the ball stops in one of the receptors;

providing one or more counters, each said counter corresponding to a said receptor of the wheel, and

incrementing a said counter each time the ball stops on the corresponding receptor.

5        Preferably, the method further includes a step of displaying a representation of at least some of the counters. The display preferably includes a bar chart having its X-axis representing the receptors on the wheel, and its Y-axis representing values stored in the corresponding counters.  
10

The method may further comprise a step of resetting one or more of the counters to 0. The resetting may occur when a counter reaches a predetermined value.

The method may further include a step of awarding the  
15        player with a bonus when a counter reaches a predetermined value.

Whilst the invention has been described above, it extends to any inventive combination of the features set out above or in the following description.

20        The invention may be performed in various ways, and, by way of example only, an embodiment thereof will now be described with reference being made to the accompanying drawings, in which:-

Figure 1 illustrates an example of a display of a  
25        simulated Roulette game on a gaming machine according to the preferred embodiment, and

Figure 2 details a bar chart included on the display of Figure 1.



The display of Figure 1 includes a simulated Roulette wheel 10. The wheel 10 represents a substantially conventional Roulette wheel having a plurality of ball receptors 16 radially arranged around its centre. 36 of the receptors are numbered 1 through to 36, plus a "0" receptor and a "00" receptor. The receptors 1 to 36 are alternately coloured red and black on the wheel, and the 0 and the 00 receptors green.

The display further includes a bet placing area 12. The betting area 12 includes a plurality of generally rectangular areas. Some of the areas have numbers 1 to 36 and 0 and 00 corresponding to the respective numbered receptors on the wheel 10. The betting area 12 may further include additional areas to allow different types of bets to be made. For example, the betting area 12 may include "red" and "black" areas representing red or black receptors on the wheel 10 regardless of the actual number on the receptor. Further areas may represent other sets of receptors on the wheel, for example, sets of receptors having odd or even numbers, sets of receptors being within a particular range (e.g. 1 to 18), or sets of receptors having numbers arranged in a row or column on the betting area.

The display further includes a representation 13 of the amount of credit which the player has. In accordance with conventional casinos, the credit is represented by simulated "chips", each chip having a nominal value. In the example of Figure 1, the player has £10.00 credit, represented by a stack 14 of ten £1 chips.

In order to place a bet on which of the receptors of the wheel 10 a simulated ball 11 will stop, the player can move the desired number of chips from the stack 14 to a certain position on the betting area 12. This may be  
5 achieved by moving a cursor 17 to select one or more chips from the stack 14 and "dragging" the chips to the betting area 12. The player is allowed to place more than one bet by repeating the bet placing procedure. The player may also withdraw a bet by dragging chips from the betting area 12 to  
10 the chip stack 14.

The position to which the chips are dragged on the betting area 12 determines the type of bet made by the player. For example, a straight bet, that is, a bet on any single number 1 to 36, 0 or 00, is made by dragging the  
15 chips within a rectangle having the corresponding number. The betting area 12 is intended to match a similar area on conventional Roulette tables, and therefore substantially conventional chip placement positions are intended to represent well known types of bets, which specify a set of  
20 receptors. Conventional types of bets which may be made during Roulette games include column bets, dozens bet, black or red bets, high or low bets, split bet, row bet, corner bet, five numbered bets and six numbered bets.

Either when a specific time has elapsed, or the player  
25 completes his bet selection by selecting a "start" symbol, the machine displays a "no more bets" announcement. After this, the player may not withdraw any bets or make further bets for the simulated spin which is to follow.

After the no more bets announcement, a simulated spin commences and the simulated wheel 10 displayed begins to rotate and a simulated ball 11 is launched on to the wheel 10. The simulation shows an animation of the wheel gradually slowing down and the ball 11 coming to a halt in one of the receptors on the wheel. In accordance with conventional Roulette rules, if one of the bets made by the player was correct, i.e. the ball stopped on a receptor corresponding to a square on the betting area 12 upon which the player had placed one or more chips or the ball stopped in a receptor specified in a set of receptors which the player had placed one or more chips, then the player is awarded a win. The amount of the win may be determined by preset odds.

The preferred embodiment of Figure 1 further includes a bar chart display 15, which is detailed in Figure 2. The Roulette gaming machine includes a number of counters, each counter corresponding to a receptor of the Roulette wheel 10. Initially, each of the counters stores a value of 0. After each simulated spin of the wheel the value of a counter corresponding to the receptor in which the ball stopped is incremented by one. The counter normally stores the value for subsequent spins until it is reset.

The bar chart 15 represents an illustration of the values stored by the counters. The X-axis 21 of the bar chart represents the receptors, numbered 1 through to 36. The Y axis 22 of the chart represents values between 0 and a predetermined limit, in the case of the specific embodi-

ment, 10. Thus, if the ball has stopped in the receptor numbered 4 nine times then a bar 23 is drawn on the chart from the number 4 on the X axis up to a point corresponding to the number 9 on the Y axis.

5        It will be understood that the bar chart of Figure 2 is only an example of a representation of the values stored by the counters. Alternative embodiments may simply be a table with each column in the table representing one of the receptors of the wheel and an entry in each column representing the number of times the ball has stopped in the  
10        corresponding receptor. More elaborate representations may also be included on the display which are also within the scope of present invention.

      The Roulette gaming machine also includes means for  
15        resetting the value stored by one or more of the counters to 0. This resetting normally occurs when one of the values stored in one of the counters reaches the predetermined limit. For example, when the ball has stopped on the receptor numbered 4 ten times then the counter corresponding  
20        to the receptor will be reset to 0, and the bar chart 15 is updated accordingly. In a particularly preferred embodiment, all of the counters are reset when the ball stops in the receptor numbered 0 once.

      In the preferred embodiment, the player is awarded a  
25        bonus when one of the counters reaches the predetermined limit. The bonus may either be a fixed sum, for example the player is awarded a number of chips. Alternatively, the bonus may increase or multiply any winning bets by a

particular value. In a further embodiment, the bonus is only awarded if the counter which has reached the predetermined value in a simulated spin is one upon which the player placed a bet.

5        In an alternative embodiment, the display may include two or more simulated balls which stop in a receptor of the wheel in a simulated spin. Preferably, only one ball is capable of stopping in a single receptor. The player may be awarded a win if he/she has placed a bet corresponding to a  
10    receptor in which any of the balls stopped. The additional balls may be included in the game following a ball purchasing operation performed by the player. The ball purchasing operation may involve the player paying a certain sum of money for an additional ball for a certain number of  
15    simulated spins. Alternatively, the ball purchasing operation may involve the player reducing the value of their credit/chips in return for an additional ball.

As the values stored by the counters increase after several simulated spins of the wheel, the chances of any one  
20    of the counters reaching the predetermined limit increases. Thus, the player feels that his/her chances of being awarded a bonus are continually growing, and therefore he/she is more inclined to continue playing the machine. Some players may also feel that they can assess which receptor the ball  
25    is likely to stop in the next spin from the record shown by the graph. The possibility of the counters being reset at certain intervals, for example when the simulated ball stops in the receptor marked 0, can also add to the involvement of

the player in the game.

Although the preferred embodiment described above relates to a stand-alone cabinet gaming machine, it will be understood that the invention extends to any machine capable of simulating a Roulette game, including personal computers  
5 configured to run a simulation of a roulette game, possibly linked over a communications network to other similarly configured machines.

Alternatively, a plurality of stand alone cabinet  
10 gaming machines may be linked together so that the multiple players can benefit from the possible bonuses related with the counters. For example, the same simulated wheel spin could be displayed on all of the machines, allowing individual players at each machine to bet on the same spin. In  
15 this case, the counters would correspond to receptors on a single wheel, with the counter display chart being shown as substantially identical on all of the individual machines.

In yet another embodiment, each linked gaming machine includes its own, independent simulated roulette wheel spin  
20 with the counters corresponding to receptors on each of the simulated wheels. Thus, a counter for a particular receptor would be incremented by two if the simulated balls of two individual machines stopped on the corresponding receptor in the independent spins of each machine.

25 In the case where a plurality of stand alone cabinet gaming machines are used, the counter display may be provided by means of a separate display, for example, a screen or LED display, mounted above the linked machines so

that individual players at each machine can view it.

Claims

1. A roulette gaming machine including:  
a display of a roulette wheel having a plurality of  
ball receptors;  
5 means for allowing a player to place one or more bets  
upon which of the receptors a ball will stop in a spin of a  
wheel, each said bet specifying a set of one or more  
receptors and an amount to be staked,  
means for displaying a spin of the wheel in which the  
10 ball stops in one of the receptors, and  
one or more counters, each said counter corresponding  
to a said receptor of the wheel,  
wherein a counter is incremented each time the ball stops on  
the corresponding receptor.
- 15 2. A roulette gaming machine according to Claim 1,  
further including means for displaying a representation of  
at least some of the counters.
3. A roulette gaming machine according to Claim 2, wherein  
the display includes a bar chart having its X axis repre-  
20 senting the receptors on the wheel and its Y axis represent-  
ing values stored in the corresponding counters.
4. A roulette gaming machine according to any one of the  
preceding claims, further including means for re-setting one  
or more of the counters to 0.
- 25 5. A roulette gaming machine according to Claim 4, wherein  
a said counter is re-set when the counter reaches a pre-  
determined value.



6. A roulette gaming machine according to claim 4, wherein the re-setting occurs when the ball stops on the receptor marked "0".

7. A roulette gamine machine according to any one of the  
5 preceding claims, further including means for awarding a player with a bonus when a said counter corresponding to a particular receptor reaches a pre-determined value.

8. A roulette gaming machine according to Claim 7, wherein the bonus is only awarded if a receptor corresponding to the  
10 counter which has reached the pre-determined value in a simulated spin is a receptor upon which the player has placed a bet.

9. A roulette gaming machine according to Claim 7, wherein the bonus awarded is a fixed amount to be credited to the  
15 player.

10. A roulette gaming machine according to Claim 7 or 8, wherein the bonus involves increasing a winning bet by a pre-determined amount.

11. A roulette gaming system comprising one or more gaming  
20 machine, each said gaming machine including:

a display of a roulette wheel having a plurality of ball receptors;

means for allowing a player to place one or more bets upon which of the receptors a ball will stop in a spin of  
25 the wheel, each said bet specifying a set of one or more receptors and an amount to be staked,

means for displaying a spin of the wheel in which the ball stops in one of the receptors, and

one or more counters, each said counter corresponding to a said receptor of the wheel,

wherein a counter is incremented each time the ball stops on a corresponding receptor,

5 the gaming machines being linked so that the roulette wheel and ball are displayed on all of the machines and the bets made by the players of each of the machines are displayed on all of the machines.

12. A roulette gaming system comprising one or more gaming machine, each said gaming machine including:

a display of a roulette wheel having a plurality of ball receptors;

means for allowing a player to place one or more bets upon which of the receptors a ball will stop in a spin of the wheel, each said bet specifying a set of one or more receptors and an amount to be staked, and

means for displaying a spin of the wheel in which the ball stops in one of the receptors,

the gaming system further including one or more counter, each said counter corresponding to a particular receptor on the wheels of the gaming machines,

the gaming machines being linked so that a said counter is incremented each time a ball of any said gaming machine stops on a corresponding receptor.

25 13. A roulette gaming system according to Claim 12, further including means for displaying a representation of at least some of the counters.

14. A roulette gaming system according to Claim 2 or Claim

13, wherein the display means is located remotely from said gaming machine.

15. A method of playing roulette on a gaming machine, the method including steps of:

5       receiving an input representing one or more bets upon which receptor of a roulette wheel a ball will stop in a spin of a wheel, each said bet specifying a set of one or more receptors and an amount to be staked;

      displaying a spin of the wheel in which the ball stops  
10   in one of the receptors;

      providing one or more counters, each said counter corresponding to a receptor of the wheel, and

      incrementing a said counter each time the ball stops in the corresponding receptor.

15   16. A method according to Claim 15, further including a step of displaying a representation of at least some of the counters.

17. A method according to Claim 15 or 16, further including a step of re-setting one or more of the counters to 0.

20   18. A method according to Claim 17, wherein the re-setting occurs when a said counter reaches a pre-determined value.

19. A method according to any one of Claims 15 to 18, further including a step of awarding a player with a bonus when a said counter reaches a pre-determined value.

25   20. A roulette gaming machine substantially as herein described with reference to the accompanying drawings.



Application No: GB 0020250.7  
Claims searched: 1-20

Examiner: Mark Sexton  
Date of search: 11 January 2001

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): A6H (HJH, HJX)

Int Cl (Ed.7): A63F 5/00, 02, 04

Other: Online: WPI, EPODOC, JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2227946 A (TECHNICAL CASINO SERVICES) - see whole document, note particularly fig.1 display 15 & reader 13, p.3 line 35- p.4 line 10	1,2,7, 11-13,15, 16 & 19
X	EP 0151376 A1 (BERGWALL) - see whole document, note particularly the figure and p.5 line 17- p.6 line 24	1,2,4 & 11-17
X	US 5857909 (RUBIN) - see whole document, note particularly fig.3 and col.3 lines 22-47	1-4 & 11-17
X	US 5743798 (ADAMS ET AL.) - see whole document, note particularly figs 1 & 3, display 38, game control 48 and winning number display 'B'	1,2,7, 11-13,15, 16 & 19

X Document indicating lack of novelty or inventive step

Y Document indicating lack of inventive step if combined with one or more other documents of same category.

& Member of the same patent family

A Document indicating technological background and/or state of the art.

P Document published on or after the declared priority date but before the filing date of this invention.

E Patent document published on or after, but with priority date earlier than, the filing date of this application.